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Emotion Design in the Educational Program "Intelligent Systems in the Humanities"

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Abstract. The article analyses the experience of building a bachelor's degree program "Intelligent systems in the Humanities" from the point of view of instructional design. When creating educational programs, it is necessary to specifically design points of contact with the educational product and consider a variety of relationships between factors that affect students. The inclusion of such subjects as "Philosophy of invention" and "Cognitive heuristics" in the curriculum helps students to consciously approach their own peculiarities of information perception. The use of module projects and practice oportunities allows students to systematize and apply the knowledge gained.

Keywords: educational program, emotion design, empathy, the Humanities, intelligent systems

1. Introduction

Emotion design in the educational curriculum can be seen as an experiment in educational design. It should be noted right away that instructional design (ID) is understood as a systematic approach to building models for the transfer of knowledge and skills. In other words, we guide a student from point A to point B, while carefully approaching the selection of knowledge transfer models. The emotions of students themselves are often put out of brackets when it comes to learning. It is believed that emotionality is inherent in teachers themselves, the learning process will be more successful if a teacher makes it emotional. The emotions of other actors are inappropriate by default. In this case, the emotions kept under control become uncontrollable, which can lead to problems in positioning the educational programme itself.

If we are talking about the emotion design in an educational programme, then it is worth considering emotions on several levels at once. First, one needs to understand what the internal goals of the educational programme

are, and secondly, to find out who will be trained. Thirdly, it is necessary to determine the context in which training will take place within the educational programme.

2. Emotion design levels

Can we say that emotions are associated with bodily sensations, and therefore they should be fundamentally separate from the acquisition of knowledge, a process that is based on logic and rational activity? I opine that it is rather difficult to separate emotions from the cognitive process.

This is confirmed by research. For example, in a 2016 study by scientists from Duke University, the fMRI (functional magnetic resonance imaging) scan results and data from questionnaires of volunteers were used to train a neural network, which subsequently showed good results in recognising emotions based on brain scan data [Kragel, 2006]. In the third phase of the experiment, 499 people underwent brain scans and later responded to how depressed or aroused they were. The neural network created brain activity 'maps' with the predominant emotion of fear or anger; those data correlated with the survey results, the emotion of fear for the oppressed state, the emotion of anger for the increased arousal. Thus, functional magnetic resonance imaging demonstrates the dynamic relationship of emotions and the process of assimilating knowledge and emotion.

The term 'emotional design' was coined by Aaron Walter [Walter, 2011], an expert in user experience optimisation. Walter describes emotional design based on Maslow's hierarchy of needs. Then it builds its own hierarchy (if you look from below, then it will contain the following blocks: functionality, reliability, usability and appearance).Thus, an educational product should first be functional, then reliable and useful. Emotional design itself is the level of satisfaction of the attendee to an educational product that you can raise above the functionality, reliability and usefulness of the product. A fine educational product is primary! Only then the polishing of the appearance through the emotional design follows.

There are quite a few emotional design methodologies. Each of them has its own advantages and disadvantages. The classic ADDIE (Analysis-Design-Development-Implementation-Evaluation) model is a linear model and therefore needs to be supplemented. ALD (Agile Learning Design) offers material on an interactive basis. The SAM (Successive Approximation Model) offers a series of iterative design-prototype-assessment cycles.

In 2004, Don Norman identified three cognitive levels, which he then related to visual design [Norman, 2005]. Those are the visceral level, behavioural level and reflective level. Norman did not apply his classification of cognitive levels to the educational design but such an application of this classification seems quite logical. It is possible for us to distribute by levels and describe the methods of influencing emotions by correlating Norman's classification and the levels of emotions in the educational programme listed above. This article is not aimed at listing all the possible ways of influencing emotions but attempts to outline a hierarchy of some of the ways related to emotional educational design.

2.1. Internal goals of the educational programme

It is very important to define inner goals, since an unspoken goal can destroy everything on its way. The suppressed emotions of the participants in the educational process can lead to the presence of a 'hidden agenda' in positioning the educational programme, which negatively affects all aspects associated with acquiring knowledge.

A very ambitious objective of the Intelligent Systems in the Humanities educational programme is to achieve fundamental interdisciplinarity in digital research pertaining to the humanities. The goals are also related to positioning the educational programme. The programme combines the skills development for the information-related activities with the liberal arts education traditions. A large humanitarian discipline module provides the basis for the classical university education, such as 'Philosophy and Methodology of Science', 'Philosophy of Technology', 'Philosophical Problems of Social and Humanitarian Sciences' and others. The curriculum includes a fairly large mathematical module including probability theory and mathematical analysis as well as a modern computer technology module including research into programming languages. Students study such special disciplines as 'Introduction to Robotics', 'Methodological Problems of Artificial Intelligence' and others.

The combination of the incongruous is the complexity stated by the educational programme graduates. In the process of study, students are faced with two types of disciplines. On the one hand, syntactic, hard disciplines, and on the other hand, semantic, light disciplines. Syntactic or algorithmic disciplines are mathematics, computer science, logic, programming and foreign languages representing disciplines that move along a rigidly defined path. Algorithms are what is learned and how it is learned. Interestingly, those

algorithmic disciplines can be taught in a semantic way. But this opportunity only appears at the higher levels of Bloom's taxonomy.

Semantic or figurative disciplines are cultural studies, history, all the humanities and partly geometry. Teaching focuses on images. Both syntactic and semantic are ways of thinking but not about the division into physicists and lyricists, engineers and persons who are more into humanities. This is about the preferred cognitive activity method for both students and teachers. People, who think syntactically, do not like drawing pictures. On the contrary, people who think semantically try to represent everything through pictures. For the said educational programme, it is essential to maintain a balance between the two types of cognitive activities. In curriculum design, it is worth observing an even distribution of both syntactic and semantic disciplines (or teaching styles) every six months.

In order to achieve the educational programme goal, it is important to provide a sense of consistency and predictability. It is emotion design that should do it at this level, yet this is not a place for experiments. Obtaining an education should not be easy nor fun as it devalues the status of education and the educational programme. Therefore, the tools used should be carefully thought through.

According to Norman's classification, the first (lower, intuitive or visceral) level is below the preconsciousness threshold as it interprets emotional signals from the environment automatically. According to Norman, activities that are intuitively initiated are 'bottom-up'. In this context, it is essential for the educational programme to affiliate with a university, since at this level it is important for students to feel a sense of security as well as belonging to a certain closed group of students of a certain university.

Both perceptual heuristics and cognitive patterns often used at this level provide a sense of security. They tell you what to expect and thus instil a sense of confidence. Nevertheless, if cognitive patterns are intentionally violated, then the resulting dissonance can develop in two scenarios. First, students will not be able to orient themselves, and there will be some frustration. Secondly, they will perceive this dissonance as a worth-while experiment.

The general intonation of communication within the educational programme is also important. The emotional factor lies in any (even the most short-term or limited) communication with a student. This intonation is not necessarily benevolent but there can be some emotions (for example, disgust) that are absolutely contraindicated for the general intonation of communication.

At this level, it is about personal and universal cultural values, and the impressions received have a direct and very strong emotional impact.

2.2. Educational programme students

The next level is much freer and the design of emotions can be very diverse. The goal of pedagogical design is to effectively teach and thus it is necessary to structure each individual discipline or, more broadly, the educational programme. Before the 2020 pandemic, pedagogical design was often seen as synonymous with online learning. Indeed, outstanding educators have done outstanding online courses and it seemed that everyone could do it. Teachers could do everything. Yet the reality turned out to be somewhat different. The main obstacle to switching education online was not at all the inertness or inflexibility of teachers but the motivation of students. It was they who were the first to talk about distance learning being very difficult. The analytical report 'Lessons of the 'Stress Test': Universities in a Pandemic and after It' prepared on the instructions of the Ministry of Education and Science of the Russian Federation shows that by the end of May 14 % of students were completely satisfied with e-learning, although in March 2020 this figure exceeded 20 % [Minobrnauki, 2020].

Yesterday's schoolchildren, who passed the uniform state exam a few months ago, will come to attend the bachelor's degree programme, which should be taken into account when designing. It is necessary to take into account their age characteristics, such as impetuosity, an uncompromising attitude and the desire to prove to themselves and others some important postulates.

According to the Norman hierarchy, this level corresponds to the cognitive behavioural level. At the behavioural level, important are functionality, performance and physical sensations as well as understanding the structure of something and the meaning of its use. The formula used here is 'functional elements that fulfil real needs'. The behavioural interface of the educational programme should be intuitive and useful for a user. Obviously, negative emotions are caused by something incomprehensible and inconvenient, and vice versa. To understand convenience/inconvenience, it is necessary to study the particular needs of a student. For example, by observing his/her interaction with certain elements of the behavioural interface.

For example, Facebook has a feature that allows one to change the interface to what pirates might have. Small details like this increase user loyalty in general and the students' commitment to the educational programme

in our particular case. Let me remind you that it is important for us to guide a student to point B without losing him/her on the way while maintaining a sufficient level of his/her motivation.

ID takes into account the process set-up, task distribution in the team and the decision-making mechanism as well as the content of the disciplines and their relationship. In this part, emotions should work for personalisation. It becomes very important to receive and process the information about how exactly students learn, interact with each other and teachers. This is not only the removal of biometric indicators but also any other quantitative data, and there are lots of them. One should learn how to use them, collect a digital footprint of students and apply this in the design of educational programmes. Among the tools used at this level, the face recognition mechanism can be named. In the aforementioned work of Walter, it is noted that a person takes himself/herself, his/her face, as a reference point with which he/she connects with everything around. If we place human faces at points of contact with an educational product, then an emotional trigger will go off automatically; recognising someone similar leads to being well regarded.

2.3. Context

The context level concerns the design of points of contact of both external and internal actors with the educational product while taking into account a variety of factors that affect the state of students. This is the reflex level, which is the 'top floor' of cognitive processes. Norman calls the activity, that occurs at this level, 'top-down behaviour'. In the literature, it is common to call this level 'reflexive', and we will continue to adhere to this. Nevertheless, in my opinion, this level should be translated as 'reflective'.

We can call this stage the level of consciousness. It is important that at the reflexive level the surroundings can be interpreted, and the world and our place in it be reflected. The reflexive level is dominant over the rest, since a person, when using his/her mind, can control the automated behaviour and track emotional effects. At the reflexive level, the general impression of the educational programme is determined; it is also decided whether it is necessary to remember the information presented.

The peculiarities of human perception lead to the fact that students tend to forget some part of the learning material straight away. The inclusion in the curriculum of disciplines, such as 'Philosophy of Invention' and 'Cognitive Heuristics' helps students consciously approach their own peculiarities of information perception. The use of module-related projects and

a large amount of practice makes it possible for one to structure and apply the knowledge gained. The programming language learned in the first year can be applied in the project work in the fourth year. All the inter-relationships are not unintentional.

Used is both direct design, such as materials, test materials, evaluation of what has been learned, and reverse design. As well as blended learning (an educational concept referring to a framework by which a student receives knowledge both independently online and in person with a teacher, thereby determining the time, place, pace and way of studying the material).

At this level, the goal of emotion design is to achieve an impact on the target audience but in a more custom-made or targeted manner. Below are a number of ways to design emotions. At first glance, they seem to be quite simple, natural and implied by default, but it would be interesting to propose a methodology and measure those parameters in existing educational programmes. I believe that the results could be very mixed.

One way is to maintain respect both offline and online. This requires absolutely excluding the communication in a condescending manner from the top position in both written and oral communications. Respect also lies in taking into account the level of preparedness of the audience. Another way is to include various kinds of social interactions in the educational process. This includes group assignments, collaboration and the use of social networks. The only limitation is the need to accurately formulate and stage those interactions.

Paradoxically, the widespread use of technology can negatively affect the educational process. From the point of view of pedagogical design, technology should not stand in the way of knowledge acquisition. This is where the issues of proper design of user interfaces and human-machine interaction are addressed. Simple technology has a positive emotional impact. Long downloads, incomprehensible instructions and denial of generally accepted standards have a negative emotional impact.

Even excessive use of game mechanics at an inopportune moment can have a negative impact. Busy people (as senior students often are) would rather have short and meaningful videos or podcasts than any extended educational quest. In contrast, undergraduate students are more inclined to smoothly integrate into the educational context with the exception of students in the first half of the first year. After physical exertion at the uniform

state exam stage, a relaxed learning style can lead to inappropriate prioritisation and force distribution and therefore problems in senior years.

Emotional responses can be triggered by adding unexpected elements to classes or the curriculum. Students can be allowed to fail as part of their educational experience. For many, this will only increase their motivation for success. In my opinion, storytelling is the most important element of emotional pedagogical design which can affect a wide variety of emotions through the mechanism of empathy. Thus, real details are added and experiences recorded. As a result, the material can be better remembered. The use of analogies, metaphors, and reference to meaningful personal memories and impressions all reinforce the emotional connections and contribute to better learning.

3. Results and discussion

Most often, all of these levels work together, so the appearance of the educational programme is an intuitive level. The programme mechanism perceived by students is the area of the behavioural emotional design, and the long-term impact of the educational design is that of the reflexive one. It is necessary to combine all three levels in the correct proportion.

Experienced teachers are familiar with all of the emotional pedagogical design techniques. They are used intuitively. Therefore, quantitative research in the field of ID is of primary concern. There are a large number of various educational methodologies, but how to choose the ones that should be included in a specific educational programme? I believe that choices can be made proceeding from evidence-based methods as well as data collection and analysis.

Blended education not only mixes formats, online and offline, but also mixes different educational methodologies by choosing the best one. It should be noted that blended education allows one to combine both traditional methods and current technologies. Walter defines emotions as a language familiar to everyone at birth. It should be noted that it is emotions that help a person to feel that the other party to educational interaction is a person. This is especially true for online learning.

Addressing students' emotions can help achieve educational outcomes. Thus, if we formulate the goal of the course in such a way that it finds an emotional response among students, then this emotional charge from the course description will smoothly pass into the learning environment.

It is often believed that more humour is needed in the communication between teachers and students. Indeed, humour is often appropriate but not always. If it is possible to put one of the students in an awkward position or offend, then it is better to do without any pre-programmed humour. Emotions can become a hindrance in the learning process if they are not related to the learning process. Inappropriate emotions (not necessarily negative ones) greatly reduce the student's ability to assimilate the material. Let me emphasise that even positive emotions do not always make learning easier, and we also need to remember that they can both help and hinder the educational process.

The challenge for curriculum designers is twofold. It is both designing emotionally rich educational products by meaningful methods and creating experiences (not necessarily positive ones) that improve learning. I would like to emphasise that the design of emotions cannot be the only toolkit for developing an educational programme. The focus should be on the content of an educational product.

3. Conclusions

Emotion design in an educational programme should be considered at three levels. First, at the level of the internal goals of the educational programme. Secondly, at the level of those who will be trained. Thirdly, at the level of the context in which studying will take place within the educational programme.

These levels can be correlated with the three cognitive levels of visual design perception (Norman). This is the intuitive level, the behavioural level and the reflective level. Most often, all of these levels work together. It should once again emphasise the primacy of the content of education. Emotion design can only be used to polish a sound educational programme.

Emotion design in the educational programme 'Intelligent Systems in the Humanities' can be applied to all levels of the educational process, since the programme is time-proven (it has been in operation since 2015). One of the key mechanisms of the emotional pedagogical design is storytelling which can influence a variety of emotions through the mechanism of empathy. Of particular interest is the quantitative research into learners' digital footprints as the choice between educational methodologies can be made based on data collection and analysis.

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Creativity as a Challenge in the EFL Classroom

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Abstract. Creative skills have been a lot in the limelight of pedagogical research recently. Creative tasks have become an integral part of modern textbooks including those for foreign language studies. The authors link the relevance of students' creativity with the growing need of the Russian economy for individuals who can think outside the box, easily adapt to constant social changes and successfully communicate in multicultural professional environments. The research attempts to present the development of creative skills in students as a process associated with difficulties in its practical implementation. The article identifies popular tasks aimed at promoting creativity in EFL classes, lists the main difficulties that teachers face when using creative tasks, and suggests ways to overcome these difficulties.

It is a descriptive and analytical study of the existing pedagogical research on the interpretation of the concepts of creativity, creative thinking and creative